

Remarks

The Examiner acknowledged consideration and entry of the Request for Continuation Examination under 37 C.F.R. 1.114, filed with the Amendment (claims 2-3, 7, 15, 17) on January 7, 2010.

The Examiner acknowledged that the previous rejections of claims 2-7 and 15-17 under 35 U.S.C. 112, second paragraph, had been withdrawn in light of Applicant's amendment to independent claim 15, reciting a limitation of adding a filler until the composition reaches a total specific gravity of 2 kg/dm³ and a hardness ranging from ShA 40 to ShD 50.

Applicant thanks the Examiner for the withdrawal of the rejections of claims 2-7 and 15-17 under 35 U.S.C. 112, second paragraph.

Claims 2-4 and 6-19 currently are under examination herein.

Claims 2-4 and 6-19 stand rejected, and Claims 2-4, 6-14, and 16-18 are objected to.

Claim Objections

The Examiner objected to claims 2-4, 6-14, and 16-18 as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Specifically, the Examiner contended that method claims 2-4, 6-14, and 16, improperly depend from composition claim 19 reciting an EPDM terpolymer and polyolefin based plasto-elastomeric composition. The Examiner also contended that while claim 17 and its dependent claims, i.e., claims 8-14 and 18, recite a plasto-elastomeric composition obtained by the method according to claim 19, claim 19 is not a method claim but a composition claim reciting an EPDM terpolymer and polyolefin based plasto-elastomeric composition.

In response, the dependency of claims 2-4, 6-9, 11-12, and 16-17 has been corrected as follows:

Claim 2 has been amended to be dependent from claim 15, to correct antecedent basis, and to recite a Markush group, i.e., "at least one olefinic monomer selected from the group

consisting of.” Support for the amendment can be found, for example, on page 6, lines 8-12. No new matter has been added.

Claim 3 has been amended to be dependent from claim 15, to correct antecedent basis, and to clarify the claim language. Support for this amendment can be found, for example, on page 5, lines 8-19. No new matter has been added.

Claim 4 has been amended to be dependent from claim 15. No new matter has been added.

Claim 6 has been amended to be dependent from claim 4 and to correct antecedent basis. No new matter has been added.

Claim 7 has been amended to be dependent from claim 15 and to clarify the claim language. Support for the amendment can be found, for example, on page 7, lines 25-32, and page 8, lines 1-9. No new matter has been added.

Claims 8-9, and 11-12, which recite a composition, have been amended to be dependent from composition claim 19 and to clarify the claim language. Accordingly, claims 10, 13, 14, and 18, which depend from claims 9, 12, 9, and 11, respectively, are now properly dependent from a composition claim. Claim 10 has been amended further for clarification purposes. Support for the amendment can be found, for example, page 7, lines 25-32, and page 8, lines 1-9. No new matter has been added.

Claim 13 has been amended to correct a self-evident typographical error and to clarify the claim language. No new matter has been added.

Claim 14 has been amended further for clarification purposes. No new matter has been added.

Claim 15 has been amended to clarify the cross-linking step and the filling step and to recite that the plasto-elastomeric composition produced by the claimed method is recyclable and nontoxic. Support for these amendments can be found, for example, on page 2, lines 19-29, on

page 3, lines 1-19, on page 4, lines 1-2, on page 7, lines 10-15 and 21-32, on page 8, lines 1-9 and 21-23, and original claim 1. No new matter has been added.

Claim 16 has been amended to correct antecedent basis, to be dependent from claim 15, and to clarify the claim language. Support for the amendment can be found, for example, on page 3, lines 1-2, and original claim 1. No new matter has been added.

Claim 17 has been amended to be dependent from claim 15 and to correct antecedent basis. No new matter has been added.

Claim 18 has been amended for clarification purposes. No new matter has been added.

Claim 19 has been amended and to recite that the plasto-elastomeric composition produced by the claimed method is recyclable and nontoxic and to clarify the claim language. Support for the amendment can be found, for example, on page 2, lines 19-29, on page 3, lines 1-19, on page 4, lines 1-2, on page 7, lines 10-15 and 21-32, on page 8, lines 1-9 and 21-23, and original claim 1. No new matter has been added.

Applicant therefore respectfully requests that the Examiner withdraw the above-described objections.

Claim Rejections

Rejections under 35 U.S.C. § 103

A. Carfagnini in view of Credali and Yamanaka

Claims 2-4 and 6-19 stand rejected as being unpatentable for obviousness over EP 230,212 (“Carfagnini”) in view of WO 2004/026957 (“Credali”), and US 2003/0013820 (“Yamanaka”).

With regard to claims 15 and 19, the Examiner contended that Carfagnini discloses a process for producing a plastomer-elastomeric composition from polyolefins and EPDM.

Specifically, the Examiner contended that Carfagnini discloses 1) mastication of the EPDM elastomer and fusion of the polyolefin plastomer; 2) thorough dispersion of the

components; 3) cross-linking of the elastomeric component; 4) even dispersion of any other additives wherein the elastomer is partially or fully cross-linked; and 5) 0.5-15 pbw per 100 pbw of EPDM of non-halogenated phenolic resin.

As for claim 2, the Examiner contended that Carfagnini discloses the polyolefin copolymers comprising ethylene, propylene, 1-butene, and 1-pentene monomers.

As for claims 4, and 6, the Examiner contended that Carfagnini discloses EPDM terpolymers comprising copolymers of ethylene, propylene and diene comprising ethylidene-norbornene, 1,4-hexadiene, and dicyclopentadiene.

As for claim 16, the Examiner contended that Carfagnini discloses the phenol-formaldehyde resol resin as claimed.

The Examiner conceded that Carfagnini discloses only a laundry list of other additives (page 3, lines 54-58) but fails to specify the inorganic fillers described in the present invention. The Examiner also acknowledged that Carfagnini does not disclose the amount of added filler and the step in which the filler is added until the composition reaches a specific gravity and a specific hardness as recited in claims 15 and 19.

The Examiner contended that the deficiencies of Carfagnini are cured by Credali and Yamanaka.

Specifically, the Examiner contended that Credali discloses 1) a composition comprising 8-25% by weight of propylene polymer or copolymer; 2) a composition comprising 75-92% by weight of elastomeric fraction comprising copolymer of ethylene, propylene and conjugated or non-conjugated diene; 3) 40-80% by weight of inorganic filler (as to claims 14 and 18).

As for claims 7-9 and 11-12, the Examiner contended that the used inorganic fillers comprise magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate (citing page 10, lines 7-13, page 11, lines 3-4), wherein the filler can be used in the form of coated particles (citing page 10, lines 33-34). The Examiner further contended that the composition comprises self-extinguishing properties, while retaining the physical and mechanical properties, and having a Shore A hardness of lower than 85 (citing page 11, lines 11-16).

The Examiner further contended that Yamanaka discloses 1) a composite material comprising ethylene-propylene-diene (EPDM) rubber, polyolefin, and an inorganic filler (citing abstract), wherein the inorganic filler comprises barium sulfate (citing paragraph [0022]), wherein the filler is added in ratio of 200-500 parts by weight relative to 100 parts by weight of rubber (citing paragraph [0011]) so that the composite comprises a specific gravity of 1.6-1.8 g/cc (citing Table 3).

The Examiner reasoned that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to add magnesium hydroxide, aluminum hydroxide, calcium carbonate or barium sulfate fillers to the composition of Carfagnini so that the composition of Carfagnini, containing 40-80% of a filler, would comprise both good flame-retardancy and elasticity properties similar to Credali, and the specific gravity of 1.6 g/cc as disclosed by Yamanaka.

The Examiner further reasoned (1) that since the process of Carfagnini in view of Credali and Yamanaka is identical to the process claimed in the instant invention, the ranges of the added components in the process of Carfagnini in view of Credali and Yamanaka are overlapping with the ranges of the components added in the process claimed in the instant invention, and (2) that since the specific flame-retardancy, hardness and elasticity of the composition depend on the specific amount of added filler and, thus on the specific gravity of the composition, such limitation as the specific content of added filler becomes a results effective variable. Therefore, the Examiner concluded that it would have been obvious to one skilled in the art at the time the invention was made to make variations in the amount of the added filler and thus in the level of the specific gravity of the final composition to reach the desired combination of flame-retardancy, hardness, and elasticity.

The Examiner noted that Applicant's arguments filed January 7, 2010 had been fully considered but were not persuasive on the following grounds:

Specifically, the Examiner contended that Carfagnini teaches (1) a plasto-elastomeric composition and a process for producing a plastomer-elastomer compositions comprising mastification of the EPDM elastomer and fusion of the polyolefin plastomer; (2) thorough dispersion of the components; (3) cross-linking of the elastomeric component with a blend of

non-halogenated phenolic resin and salicylic acid; (4) followed by even dispersion of any other additives (citing page 2, lines 54-58). The Examiner conceded that Carfagnini fails to specify the additives being magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate, which comprise 90% or less of the composition, and addition of the filler to the composition until the final specific gravity is 2 kg/dm³.

The Examiner, however, contended that Credali discloses (1) a composition comprising 8-25% by weight of propylene polymer or copolymer; (2) a composition comprising 75-92% by weight of elastomeric fraction comprising copolymer of ethylene, propylene and conjugated or non-conjugated diene; (3) 40-80% by weight of inorganic filler comprising magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate, wherein the composition comprises a Shore A hardness of lower than 85 (citing page 11, lines 17-18), good flame retardancy and good elastic properties (citing page 11, lines 21-26). The Examiner further contended that Yamanaka discloses a composite material comprising ethylene-propylene-diene (EPDM) rubber, polyolefin, and an inorganic filler, wherein the inorganic filler is added in ratio so that the composite comprises a specific gravity of 1.6-1.8 g/cc.

Accordingly, the Examiner contended that both Credali and Yamanaka teach that inorganic filler may be added to the plasto-elastomeric composition to achieve Shore A hardness of lower than 85, specific gravity of 1.6-1.8g/cc and good flame-retardancy and reasoned that, since the specific flame-retardancy, hardness, and elasticity of the composition depend on the amount of specific filler having specific gravity added to the composition, such limitation as the specific amount of added filler having specific gravity becomes a result effective variable, therefore, it would have been obvious to one skilled in the art at the time the invention was made, to make variations in the amount of the added filler and, thus in the level of the specific gravity of the final composition, to reach the desired combination of flame-retardancy.

Applicant respectfully disagrees.

Applicant urges that, for the following reasons, Carfagnini, Credali and Yamanaka, individually or combined, do not teach, disclose, or suggest the invention as claimed and that a person of skill in the art, at the time the invention was made, would not have concluded that the inventions of claims 15 and 19 are obvious over the cited references.

In contrast to the Examiner's contention, Credali and Yamanaka do not disclose EPDM-polyolefin copolymers made by cross-linking EPDMs and polyolefins; instead, Credali and Yamanaka only disclose either highly filled soft polyolefin compositions (Credali) or EPDM polymers (a cross-linked polymer containing ethylene-propylene rubber, polyethylene, Yamanaka) with a specific gravity. Moreover, Carfagnini discloses a laundry list of additives, but discloses nothing regarding the types, conditions, and feasibility of adding an inorganic filler to an EPDM-polyolefin copolymer while maintaining its optimal elastic and thermoplastic characteristics.

Since EPDM-polyolefins and polyolefins are different compounds, Applicant respectfully submits that the Examiner, who merely invokes the level of skill in the art, has not explained what specific understanding or technological principle, along with the knowledge of one of ordinary skill in the art, would have suggested the proposed combination. See, e.g., *In re Rouffet*, 47 U.S.P.Q. 2d 1453 (Fed. Cir. 1998).

Moreover, the cited references, either taken alone or in combination, do not teach or suggest that the recyclable and nontoxic plasto-elastomeric composition does not produce chlorine or dust or contain heavy metals.

Applicant also urges that a person of ordinary skill in the art would have had no plausible reason to combine the cited references and, having combined these references, would have had no reasonable expectation of success.

The present invention relates to producing EPDM-polyolefin copolymers, wherein an EPDM terpolymer is cross-linked with a polyolefin by combining nonhalogenated alkylphenol-formaldehyde phenolic resin and salicylic acid and by adding to the cross-linked polymer at least one filler of mineral origin. The specification discloses that mineral fillers are known in the art to negatively influence the physical-mechanical properties of an elastomer, causing lower elongation, lower tensile strength, and higher brittleness, which are undesirable properties given their utility.

Applicant urges that based on the state of the art, a person of skill in the art would have had no reasonable expectation of success in achieving the claimed composition and the process

by combining the cited references. Credali only discloses that certain mineral fillers can be added to polyolefins, but the present invention comprises an additional component, namely an EPDM terpolymer-polyolefin copolymer. This plus the known negative influence of mineral fillers on the physical-mechanical properties of an elastomer would have made the outcome of adding a mineral filler to the copolymer unpredictable.

Furthermore, as disclosed in the present specification, the process of cross-linking EPDM terpolymer with polyolefin is known to be unpredictable, due to: (1) non-homogeneous cross-linking, (2) poor dispersion of the cross-linking agents in the entire plasto-elastomeric composition at temperatures equal to or greater than that at which the elastomer melts (page 2, lines 7-15), and (3) development of environmentally damaging halogens. The specification further discloses that the process and compositions of the present invention limit the development of chlorine, which is harmful to the environment. In contrast, Credali discloses that the polymerization process to produce the polyolefins requires a halogen catalyst (page 7-8), which would lead to halogen contamination of the product. The present invention as claimed requires nonhalogenated components.

For the reasons discussed above, Applicant respectfully urges that one of ordinary skill in the art would not have been able to achieve the present invention as claimed while still maintaining optimal elastic and thermoplastic characteristics of the EPDM-polyolefin copolymers as described in the present invention from the teachings of Carfagnini, Credali, and Yamanaka, taken alone or in combination.

Applicant therefore respectfully requests that the Examiner withdraw the rejections on this ground.

B. Carfagnini in view of Credali, Yamanaka, and Hawley's

Claims 8, 10, and 13 stand rejected as being unpatentable for obviousness over EP 230,212 ("Carfagnini") in view of WO 2004/026957 ("Credali"), and US 2003/0013820 ("Yamanaka") in further view of "Hawley's Condensed Chemical Dictionary", 14th Edition, 2002, by John Wiley & Sons, Inc; "Hawley's").

The teachings of Carfagnini, Credali, and Yamanaka were discussed above. The Examiner admitted that Carfagnini in view of Credali and Yamanaka fail to specify the use of calcium carbonate having specific gravity 2.71 g/cc, aluminum hydroxide having specific gravity 2.4 g/cc, and barium sulfate having specific gravity 4.48 g/cc, but stated that Hawley's evidences that they are commercially available.

The Examiner reasoned that it would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to use commercially available calcium carbonate with specific gravity 2.71 g/cc, aluminum hydroxide with specific gravity 2.4g/cc, barium sulfate with specific gravity 4.48 g/cc in the composition and process of Carfagnini in view of Credali and Yamanaka, as it would have been obvious to substitute one equivalent for another use for the same purposes. Specifically, the Examiner pointed out that case law holds that the mere substitution of an equivalent is not an act of invention. *In re Ruff* 118 USPQ 343 (CCPA 1958).

Applicant disagrees and urges that a person of ordinary skill in the art would have had no plausible reason to combine the cited references and, having combined these references, would have had no reasonable expectation of success of achieving the claimed invention.

Applicant respectfully notes that case law also holds that, in order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). (emphasis added). Here, the Examiner merely relies on hindsight reasoning based on Applicant's own disclosure and contends that inorganic fillers are functionally equivalent for all polymers. However, the references cited by the Examiner do not establish that the same kind and the same amount of an inorganic filler for either polyolefins or EPDM also could be used in producing EPDM-polyolefin copolymers. Specifically, whereas the cited references disclose adding inorganic fillers to polyolefins or to EPDM, the references essentially are silent as to using inorganic fillers in preparing EPDM-polyolefin copolymers; and Hawley's merely discloses that inorganic fillers having a specific gravity are commercially available.

As discussed in Section A, the present invention relates to producing EPDM-polyolefin copolymers, wherein an EPDM terpolymer is cross-linked with a polyolefin by combining

nonhalogenated alkylphenol-formaldehyde phenolic resin and salicylic acid and by adding to the cross-linked polymer at least one filler of mineral origin. However, it is known in the art that mineral fillers negatively influence the physical-mechanical properties of an elastomer, causing lower elongation, lower tensile strength, and higher brittleness.

Based on the state of art, Applicant urges that a person of skill in the art would have had no reasonable expectation of success in achieving the claimed invention by combining the cited references. Credali only discloses that certain mineral fillers can be added to polyolefins, but the present invention comprises an additional component, namely a EPDM terpolymer-polyolefin copolymer, This plus the known negative influence of mineral fillers on the physical-mechanical properties of an elastomer would have made the outcome of adding a mineral filler to the copolymer unpredictable.

Furthermore, the cited references, taken either alone or in combination, do not teach or suggest that the recyclable and nontoxic plasto-elastomeric composition does not produce chlorine or dust or contain heavy metals.

Accordingly, since a person of skill in the art would have had no reasonable expectation of success to arrive at the claimed invention by combining the cited references and the elasto-plastomeric compositions of claims 8, 10 and 13 exhibit a novel property not taught or suggested by the prior art, Applicant respectfully requests that the Examiner withdraw the rejections on this ground.

C. Carfagnini in view of Credali and Sullivan

Claims 2-4, 6-19 stand rejected as being unpatentable for obviousness over EP 230,212 (“Carfagnini”) in view of WO 2004/026957 (“Credali”) and US 2004/0209707 (“Sullivan”).

The Examiner’s contentions as to the teachings of Carfagnini and Credali are discussed above in Section A.

As for Sullivan, the Examiner contended that Sullivan discloses a multi-layered golf ball, wherein each of the layers appears to have different specific gravity and different Shore hardness. Specifically, the outer core layer comprising EPDM rubber in Sullivan is filled with

density increasing material, such as calcium carbonate or barium sulfate, having a specific gravity of greater than 1.75g/cc or greater than 2g/cc. The filler comprises calcium carbon having specific gravity of 2.71 g/cc or barium sulfate having specific gravity of 4.6 g/cc; the outer core layer appears to have Shore D hardness of at least 30. The Examiner reasoned, therefore, that Sullivan teaches that by addition of density increasing fillers such as calcium carbonate or barium sulfate to specific compositions of different layers, the desired specific gravity and desired hardness of each layer may be achieved.

The Examiner concluded that it would have been obvious to one of ordinary skill in the art at the time the invention was made to add magnesium hydroxide, aluminum hydroxide, calcium carbonate or barium sulfate fillers to the composition of Carfagnini, so that the composition of Carfagnini, containing 40-80% of a filler, would comprise both good flame-retardancy and elasticity properties, similar to Credali, wherein by addition of specific filler to a specific amount, the desired specific gravity and Shore hardness of the composition may be obtained. Furthermore, the Examiner reasoned that since the specific gravity and Shore hardness of the composition depends on the amount of added specific filler having a specific gravity, such limitation as the amount of added specific filler having specific gravity becomes a results effective variable, therefore it would have been obvious to one skilled in the art at the time the invention was made, to make variations in the amount of specific filler having specific gravity added to the rubber composition to obtain the desired specific gravity and shore hardness of the final composition (citing *In re Boesch*, 617 F.2d 272 and MPEP 2144.05 II).

Applicant respectfully disagrees and urges that a person of ordinary skill in the art would have had no plausible reason to combine the cited references and, having combined these references, would have had no reasonable expectation of success.

Although the theoretical mechanism of an invention may be explained by logic and sound scientific reasoning, this fact does not support an obviousness determination unless logic and scientific reasoning would have led one of ordinary skill in the art to make the claimed invention. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). With this in mind, Applicant respectfully reminds the Office that its rationale offered to support a rejection under 35 U.S.C. 103 must rely on logic and sound scientific principle. See MPEP 2144(02)

citing *In re Soli*, 317 F.2d 941, 137 U.S.P.Q. 797 (CCPA 1963), and that when an Examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided. *In re Grose*, 592 F.2d 1161, 201 U.S.P.Q. 57 (CCPA 1979). Applicant respectfully submits that the Examiner has not provided such evidentiary support.

The present invention relates to producing EPDM-polyolefin copolymers, wherein an EPDM terpolymer is cross-linked with a polyolefin by combining nonhalogenated alkylphenol-formaldehyde phenolic resin and salicylic acid and by adding to the cross-linked polymer at least one filler of mineral origin. However, as disclosed by the instant specification, mineral fillers are known in the art to negatively influence the physical-mechanical properties of an elastomer, causing lower elongation, lower tensile strength, and higher brittleness.

Based on the state of art, Applicant urges that a person of skill in the art would have had no reasonable expectation of success in achieving the claimed invention by combining the cited references. Credali only discloses that certain mineral fillers can be added to polyolefins, but the present invention comprises an additional component, namely EPDM terpolymer-polyolefin copolymer. This plus the known negative influence of mineral fillers on the physical-mechanical properties of an elastomer would have made the outcome of adding a mineral filler to the copolymer unpredictable.

Furthermore, the cited references, taken either alone or in combination, do not teach or suggest that the recyclable and nontoxic plasto-elastomeric composition does not produce chlorine or dust or contain heavy metals.

Accordingly, since a person of ordinary skill in the art would have had no reasonable expectation of success in achieving the claimed invention by combining the cited references and the elasto-plastomeric compositions produced by the claimed method exhibit a novel property not taught or suggested by the prior art, Applicant respectfully requests that the Examiner withdraw the rejections on this ground.

D. Carfagnini in view of Credali, Sullivan, and Hawley's

Claims 10 and 13 stand rejected as unpatentable for obviousness over EP 230,212 (“Carfagnini”) in view of WO 2004/026957 (“Credali”) and US 2004/0209707 (“Sullivan”) in

further view of “Hawley’s Condensed Chemical Dictionary”, 14th Edition, 2002, by John Wiley & Sons, Inc; “Hawley’s”).

The Examiner’s contentions as to the teachings of Carfagnini, Credali, and Sullivan are discussed above. The Examiner admitted that Carfagnini in view of Credali and Sullivan fail to specify the use of aluminum hydroxide having specific gravity 2.42 g/cc, barium sulfate having specific gravity 4.48 g/cc, but contended that Hawley’s teaches calcium carbonate with a specific gravity of 2.71 g/cc, aluminum hydroxide with a specific gravity of 2.42g/cc, and barium sulfate with a specific gravity 4.48g/cc.

The Examiner reasoned that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use commercially available aluminum hydroxide with specific gravity 2.42 g/cc, barium sulfate with specific gravity 4.48 g/cc in the composition and process of Carfagnini in view of Credali and Sullivan as it would have been obvious to substitute one equivalent for another used for the same purposes. The Examiner stated that case law holds that the selection of a known material based on its suitability for its intended use supports prima facie obviousness, and that the mere substitution of an equivalent is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable.

In response, Applicant respectfully notes that case law also holds that in order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot based on applicant’s disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). (emphasis added). Here, the Examiner merely relies on hindsight reasoning based on Applicant’s own disclosure and contends that inorganic fillers are functionally equivalent for all polymers. However, the references cited by the Examiner do not establish such equivalency, i.e., whether the same kind and the same amount of an inorganic filler for polyolefins or EPDM also could be used in producing EPDM-polyolefin copolymers. Specifically, whereas the cited references disclose adding inorganic fillers to polyolefins or to EPDM, the references are essentially silent as to using inorganic fillers in preparing EPDM-

polyolefin copolymers; Hawley's merely discloses that inorganic fillers having a specific gravity are commercially available.

The present invention relates to producing EPDM-polyolefin copolymers, wherein an EPDM terpolymer is cross-linked with a polyolefin by combining nonhalogenated alkylphenol-formaldehyde phenolic resin and salicylic acid and by adding to the cross-linked polymer at least one filler of mineral origin. However, at the time of the invention, mineral fillers were known to negatively influence the physical-mechanical properties of an elastomer, causing lower elongation, lower tensile strength, and higher brittleness.

Based on the state of art, Applicant urges that a person of skill in the art would have had no reasonable expectation of success in achieving the claimed invention by combining the cited references. Credali only discloses that certain mineral fillers can be added to polyolefins, but the present invention comprises an additional component, namely EPDM terpolymer-polyolefin copolymer. This plus the known negative influence of mineral fillers on the physical-mechanical properties of an elastomer would have made the outcome of adding a mineral filler to the copolymer unpredictable.

Furthermore, the cited references, taken either alone or in combination, do not teach or suggest that the recyclable and nontoxic plasto-elastomeric composition does not produce chlorine or dust or contain heavy metals.

Accordingly, since a person of skill in the art would have had no reasonable expectation of success in achieving the claimed invention by combining the cited references and the elastoplastomeric compositions of claims 10 and 13 exhibit a novel property not taught or suggested by the prior art, Applicant respectfully requests that the Examiner withdraw the rejections on this ground.

* * *

Since there is no prior art that teaches or suggests the claimed invention, Applicant respectfully requests that the Examiner withdraw all objections to and rejections of the present invention.

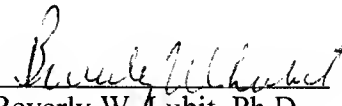
Applicant urges that this application is now in condition for allowance and earnestly solicits early and favorable action by the Examiner. If the Examiner believes that issues may be resolved by a telephone interview, the Examiner is respectfully urged to telephone the undersigned at 973-360-7934. The undersigned also may be contacted via e-mail at lubitb@gtlaw.com.

AUTHORIZATION

The Commissioner hereby is authorized to charge any fees, including the appropriate fee for a submission of a terminal disclaimer by a small entity, which may be required, or credit any overpayment to Deposit Account 501561.

Respectfully submitted,
For Greenberg Traurig
By

Date: 5/1/10


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